Comp. Biochem. Physiol. Vol. 117A, No. 4, pp. III–VIII, 1997
Copyright © 1997 Elsevier Science Inc.

ELSEVIER

ISSN 0300-9629/97/$17.00

CONTENTS OF VOLUME 117

Vol. 117A, No. 1

1 In appreciation

Reviews

W. J. Poly 11 Nongenetic variation, genetic-environmental interactions and altered gene expression. I. Temperature, photoperiod, diet, pH and sex-related effects

W. Davison 67 The effects of exercise training on teleost fish, a review of recent literature

General Papers

D. M. Medeiros, L. Shiry, and T. Samelman 77 Cardiac nuclear encoded cytochrome *c* oxidase subunits are decreased with copper restriction but not iron restriction: Gene expression, protein synthesis and heat shock protein aspects

P. C. Dagher, H. Chawla, J. Michael, R. W. Egnor, and A. N. Charney 89 Modulation of chloride secretion in the rat ileum by intracellular bicarbonate

R. Tremblay and J. Pellerin-Massicotte 99 Effect of the tidal cycle on lysosomal membrane stability in the digestive gland of *Mya arenaria* and *Mytilus edulis* L.

J. D. Thomas and C. Kowalczyk 105 Utilization of dissolved organic matter (DOM), from living macrophytes, by pulmonate snails: Implications to the "food web" and "module" concepts

P. G. Arthur, C. E. Franklin, K. L. Cousins, H. Thorarensen, P. W. Hochachka, and A. P. Farrell 121 Energy turnover in the normoxic and anoxic turtle heart

J. D. Craik, J. D. Young, and C. I. Cheeseman 127 Nucleoside transport in erythrocytes from bottle-nosed dolphin (*Tursiops truncatus*)

Ø. Ahlstrøm and A. Skrede 135 Liver fatty acid composition and peroxisomal fatty acid oxidase activity in blue foxes (*Alopex lagopus*) and mink (*Mustela vison*) fed diets containing different levels of fish oil

P. Berthon, M. Van Der Veer, C. Denis, and D. Freyssenet 141 L-Carnitine stimulation of mitochondrial oxidative phosphorylation rate in isolated rat skeletal muscle mitochondria

J. Hoffman and U. Katz 147 Salt and water balance in the toad *Bufo viridis* during recovery from two different osmotically stressful conditions

K. Azuma 155 Light-induced changes of extracellular volume in a planarian ocellus

Vol. 117A, No. 2

Review

C. B. Jørgensen 161 Urea and amphibian water economy

General Papers

J.-L. Bomsel, M. Edjlali, and R. Calvayrac 171 Nucleotide pools and physiological consequences of heat shock in euglena cells

E. H. Schlenker and J. Eikanger 177 Propranolol blocks and stimulatory effects of naloxone on ventilation and oxygen consumption in hamsters

M. Yanaura, S. Yamada, S. Shiono, and M. Nakashima 183 Optical recording of neural signals evoked by greater superficial petrosal nerve stimulation in rat

T. Matsuo, S. Ooe, and Y. Ishikawa 191 Limitation of dietary copper and zinc decreases superoxide dismutase activity in the onion fly, *Delia antiqua*

F. J. Carreras, D. Porcel, and F. González-Caballero 197 Expanding forces in aqueous outflow pathways of a nonaccommodating mammal: An approach via comparative dynamic morphology

N. Hernández, S. H. Torres, and M. Rivas	211	Inactivity changed fiber type proportion and capillary supply in cat muscle
T.-L. Xu, T. Imanishi, and N. Akaike	219	Modulation of the $GABA_A$ response in rat ventromedial hypothalamic neurons by pregnanolone
P. S. Davie and H. Thorarensen	227	Heart growth in rainbow trout in response to exogenous testosterone and 17-α methyltestosterone
E. Agosto, M. Cimmino, Y. Minaire, and A. Géloën	231	Short-term cold-exposure does not improve insulin sensitivity in rats
J.-C. Chen and P.-G. Chia	239	Osmotic and ionic concentrations of *Scylla serrata* (Forskål) subjected to different salinity levels
G. Le Dréan, I. Le Huërou-Luron, J. A. Chayvialle, V. Philouze-Romé, M. Gestin, C. Bernard, R. Toullec, and P. Guilloteau	245	Kinetics of pancreatic exocrine secretion and plasma gut regulatory peptide release in response to feeding in preruminant and ruminant calves
T. Obata and Y. Yamanaka	257	Protective effect of diltiazem on myocardial ischemic injury associated with ·OH generation
E. C. Lavelle and J. E. Harris	263	The processing of an orally administered protein antigen in the digestive tract of rainbow trout, *Oncorhynchus mykiss*

Vol. 117*A*, *No.* 3

Cell Osmotic Relations Symposium

R. Gilles	277	Introduction: Cell osmotic relations during high salinity/osmolarity and dehydration stresses
R. Gilles	279	"Compensatory" organic osmolytes in high osmolarity and dehydration stresses: history and perspectives
D. M. Cohen	291	Mitogen-activated protein kinase cascades and the signaling of hyperosmotic stress to immediate early genes
J. S. Handler and H. M. Kwon	301	Kidney cell survival in high tonicity
M. J. Danson and D. W. Hough	307	The structural basis of protein halophilicity
C. Houssier, R. Gilles, and S. Flock	313	Effects of compensatory solutes on DNA and chromatin structural organization in solution
K. B. Storey	319	Organic solutes in freezing tolerance
W. Q. Sun and A. C. Leopold	327	Cytoplasmic vitrification and survival of anhydrobiotic organisms
F. A. Hoekstra, W. F. Wolkers, J. Buitink, E. A. Golovina, J. H. Crowe, and L. M. Crowe	335	Membrane stabilization in the dry state
E. A. Golovina, W. F. Wolkers, and F. A. Hoekstra	343	Long-term stability of protein secondary structure in dry seeds
W. F. Wolkers and F. A. Hoekstra	349	Heat stability of proteins in desiccation-tolerant cattail (*Typha latifolia* L.) pollen. A Fourier transform infrared spectroscopic study
E. A. Galinski, M. Stein, B. Amendt, and M. Kinder	357	The kosmotropic (structure-forming) effect of compensatory solutes

General Papers

A. J. Bårdgard, I. Strand, M. Nuutinen, E. Jul, and O. Brix	367	Functional characterisation of Eskimo dog hemoglobin: I. Interaction of Cl^- and 2,3-DPG and its importance to oxygen unloading at low temperature
A. J. Bårdgard and O. Brix	375	Functional characterisation of Eskimo dog hemoglobin: II. The interplay of HCO_3^- and Cl^-
R. D. Dawson and G. R. Bortolotti	383	Variation in hematocrit and total plasma proteins of nestling American kestrels (*Falco sparverius*) in the wild
J. D. Morgan, T. Sakamoto, E. G. Grau, and G. K. Iwama	391	Physiological and respiratory responses of the Mozambique tilapia (*Oreochromis mossambicus*) to salinity acclimation
S. C. Nicol, D. Pavlides, and N. A. Anderson	399	Nonshivering thermogenesis in marsupials: Absence of thermogenic response to β3-adrenergic agonists
C. M. Luquet and M. Ansaldo	407	Acid-base balance and ionic regulation during emersion in the estuarine intertidal crab *Chasmagnathus granulata* Dana (Decapoda Grapsidae)

N. I. Agalakova, A. V. Lapin, and G. P. Gusev 411 Temperature effects on ion transport across the erythrocyte membrane of the frog *Rana temporaria*

T. Gollas-Galván, J. Hernández-López, and F. Vargas-Albores 419 Effect of calcium on the prophenoloxidase system activation of the brown shrimp (*Penaeus californiensis,* Holmes)

Vol. 117*A*, *No.* 4

P. Webb, T. Wooldridge, and T. Schlacher 427 Osmoregulation and spatial distribution in four species of mysid shrimps

F.-Y. Lee and C.-F. Chang 433 The concentrations of vitellogenin (Vitellin) and protein in hemolymph, ovary and hepatopancreas in different ovarian stages of the freshwater prawn, *Macrobrachium rosenbergii*

K. E. Jain, J. C. Hamilton, and A. P. Farrell 441 Use of a ramp velocity test to measure critical swimming speed in rainbow trout (*Onchorhynchus mykiss*)

K. Van Nerum and H. Buelens 445 Hypoxia-controlled winter metabolism in honeybees (*Apis mellifera*)

J. Hill and I. A. Johnston 457 Temperature and neural development of the Atlantic herring (*Clupea harengus* L.)

Y. Yun, D. C. McFarland, J. E. Pesall, K. K. Gilkerson, L. S. Vander Wal, and N. H. Ferrin 463 Variation in response to growth factor stimuli in satellite cell populations

T. Z. Berardini, M. Drygas-Williams, G. V. Callard, and D. R. Tolan 471 Identification of neuronal isozyme specific residues by comparison of goldfish aldolase C to other aldolases

D. A. Oswalt, A. G. Appel, and L. M. Smith II 477 Water loss and desiccation tolerance of German cockroaches (Dictyoptera: Blattellidae) exposed to moving air

J. Fuentes and F. B. Eddy 487 Drinking in atlantic salmon presmolts and smolts in response to growth hormone and salinity

C. Bennis, L. Cheval, B. Buffin-Meyer, M. Younes-Ibrahim, C. Barlet-Bas, S. Marsy, and A. Doucet 493 Cold- and ouabain-resistance of renal Na,K-ATPase in cold-exposed and hibernating jerboas (*Jaculus orientalis*)

G. E. Berge, E. Lied, and H. Sveier 501 Nutrition of Atlantic salmon (*Salmo salar*): The requirement and metabolism of arginine

F. Bozinovic and F. F. Novoa 511 Metabolic costs of rodents feeding on plant chemical defenses: A comparison between an herbivore and an omnivore

S. M. Secor and J. A. Phillips 515 Specific dynamic action of a large carnivorous lizard, *Varanus albigularis*

R. E. Haddad, A. R. Jurjus, M. Z. M. Ibrahim, Z. A. Nahle, M. M. El-Kasti, K. M. Bitar, S. I. Kreydiyyeh, F. A. Saadeh, and A. B. Bikhazi 523 Binding of ^{125}I-insulin on capillary endothelial and myofiber cell membranes in normal and streptozotocin-induced diabetic perfused rat hearts

M. Rode, T. Berg, and T. Gjøen 531 Effect of temperature on endocytosis and intracellular transport in the cell line SHK-1 derived from salmon head kidney

H. Petit, G. Nègre-Sadargues, R. Castillo, and J.-P. Trilles 539 The effects of dietary astaxanthin on growth and moulting cycle of postlarval stages of the prawn, *Penaeus japonicus* (Crustacea, Decapoda)

T. P. D. Eldershaw, C. Duchamp, J. Ye, M. G. Clark, and E. Q. Colquhoun 545 Potential for non-shivering thermogenesis in perfused chicken (*Gallus domesticus*) muscle

I Volume Contents, Subject, and Author Index for Vol. 117A